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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,510	08/16/2005	Antonio Lopez Munoz	MDR-0039	7871
34610	7590	05/13/2008		
KED & ASSOCIATES, LLP P.O. Box 221200 Chantilly, VA 20153-1200			EXAMINER MCCLENDON, SANZA L	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 05/13/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/525,510

**Applicant(s)**

LOPEZ MUNOZ, ANTONIO

**Examiner**

Sanza L. McClendon

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. In response to the Amendment received on January 17, 2008, the examiner has carefully considered the amendments. The claim rejection under 35 U.S.C. § 112, 2nd paragraph for claims 19-30 have been overcome by the amendment and has hereby been withdrawn for consideration. The amendment to the specification is acknowledged, however said amendment appears to be new matter because applicant's translation attachments are not found and these do not appear to be certified. In addition, the examiner has not did not find the translation "dispersed dyes" from the Webster on-line dictionary and could not locate a copy to "Diccionario Politecnico de las Lengaua Espanola e Inglesa" to confirm said translation. The examiner did find two online translations for "colorant dispersos" at Babel Fish and SpanishDict, wherein "colorant dispersos" translated into dispersed colorants--see attachment. From these translations, the examiner deems that a "dispersed colorant" includes both dyes and pigments.

### ***Response to Arguments***

2. Applicant's arguments filed January 17, 2008 have been fully considered but they are not persuasive. As stated above applicant's translation is not accepted for the reasons stated above. Thus turning to the prior art arguments. Applicants argue that both Marshall et al and Johnson et al do not anticipate the claimed invention because neither of them teaches "dispersed dye" and they both teach different methods of making the composition from the method as instantly claimed. Regarding Marshall et al applicant's state these teachings cannot anticipate the claimed invention because the method of mixing is different and, also, because the two mixtures of Marshall are not remotely similar to those instantly claimed, such as Marshall mixes the photoinitiator in with the first composition and there are no teachings of using a mixture of oligomers with monomers with the dispersed colorant. First it is deemed that Marshall et al does teach dyes--see column 4, lines 36-40, wherein azo complex dyestuffs and, also, colored dyes can be found. Secondly, regarding applicant's arguments to the addition of the Marshall et al photoinitiator being added to the first mixture, the court has upheld that the "mere methods of mixing ingredients to form a new composition is not patentable" in *In re Beckett*, 1937 C.D. 386. Additionally, the courts have upheld "ordinarily, process steps taken concurrently are equivalent of steps taken successively"--see *Asbestos Shingle, Slate & Sheathing Co. et al vs. Rock Fiber Mfg. Co.*, 217 F. 66. Regarding Marshall et al's failure to suggest the mixture of oligomers and monomers with the

"dispersing dyes", the examiner disagrees. Marshall et al teaches per column 5, combinations of low molecular weight multifunctional ethylenically unsaturated or epoxy functional prepolymers with low molecular weight monomers of various functionalities are possible in making the ink-jet formulations—see column 5, lines 40-45. Regarding applicant's statements referring to Column 4, lines 39-42, these are deemed to be a suggestion to ordinarily skilled artisan especially since Marshall et al states "if necessary" in the statement. In addition, this statement has nothing to do with the other components taught by Marshall et al in the ink-jet composition. It is well known that pigments and dyes sometimes need to be in the form of dispersion to prevent agglomeration and/or clumping of pigment particles in ink compositions. It is deemed that Marshall et al does teach dispersing colorants in a mixture of oligomers and monomers, milling to a particle size of no greater than 1 micron, diluting the previous mixture with mono- and multi-functional oligomers and a photoinitiator, and then jetting onto a substrate and exposing to radiation to cure. Additionally, per example Marshall filters the combined compositions to a particle size of 1 micron before jetting and curing. Therefore the claims (method and product) are still rejected by Marshall et al. Regarding Johnson et al, applicant's state that Johnson et al does not teach dispersed dyes, the examiner disagrees while Johnson et al teaches and prefers the use of pigments does not exclude the use of dyes--see column 2, lines 19-20. Johnson et al states "While the possibility of using colorants, such as dyes, which are soluble in the diluent is not excluded." Applicant argues that Johnson et al teaches away from high temperature applications are refers examiner to column 8, lines 12-14. From these teaching the examiner deems, one that ink jetting at high temperatures is not a claim limitation and two Johnson et al teaches that the addition of a conductive additives can help overcome this--see column 8, lines 23-26. Regarding Johnsons et al method of mixing the components in the ink composition, the courts have upheld that the "mere methods of mixing ingredients to form a new composition is not patentable" in *In re Beckett*, 1937 C.D. 386. Additionally, the courts have upheld "ordinarily, process steps taken concurrently are equivalent of steps taken successively"--see *Asbestos Shingle, Slate & Sheathing Co. et al vs. Rock Fiber Mfg. Co.*, 217 F. 66. Thus it is deemed that the claims are still rejected by Johnson et al.

### *Specification*

3. The amendment filed January 17, 2008 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Applicant's translation attachments are missing and these, from the arguments, do not appear to be certified translations.

Applicant is required to cancel the new matter in the reply to this Office Action.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 19-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Please see above section Response to Arguments and the above objection to specification.

***Claim Rejections - 35 USC § 102/Claim Rejections - 35 USC § 103***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

The examiner is interpreting the instant claims as a method for producing an ink; the limitation “digital printing” is being interpreted as a future intended use because digital printing is a means for depositing the ink onto a substrate. The claims define a process for making an ink composition, wherein the “digital printing” limitation imparts no distinctive structural characteristics to define it from any other type of ink.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 19-30 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Marshall et al (5,275,646).

Marshall et al teaches a photocurable ink composition. Said ink comprises a colorant and a liquid phase consisting essentially of polymerizable monomers, an optional conductive compound and a photoinitiator and/or sensitizer. The composition is curable by exposure to radiation, such as ultraviolet light. The composition can comprise up to 70%, e.g. 20 to 60%, by weight of a mono-functional monomer, such as isobornyl acrylate among others found in column 3. In order to balance the properties Marshall et al sets forth the addition from up to 70%, preferably from 30 to 50% of di-functional monomers, such as hexandiol acrylates, tripropylene glycol di (meth) acrylates, and others as found in column 3. Additionally, Marshall et al sets forth the use of up to 10% by weight of tri-functional monomers, such as trimethylolpropane tri (meth) acrylate—see column 3. The photoinitiators and photosensitizers can be found in column 4 along with the colorant. Additionally, polymers and prepolymers can be added to increase viscosity and/or increase the crosslink density in the cured ink—see column 5. Marshall et al sets forth in such a way that one of ordinary skill in the art would be able to obtain viscosities as high as up to 50 cps at 25 °C can be obtained or as low as 5 to 6 cps at 25 °C can be obtained depending on the amount of/proportions of reactive monomers added to the composition in the overall teachings of the disclosure—see column 2, column 3, lines 45, column 5, lines 29-64, and column 6, lines 20-21. Therefore, it is deemed Marshall et al encompasses applicant's viscosity range of 10 to 30 cps. Per example 1, Marshall et al teaches preparing a mixture of reactive monomers and photoinitiators. Separately, preparing a mixture comprising a colorant and reactive monomers and prepolymer/polymers to prepare a pigment dispersion and milling the dispersion to a particle size of no greater than 1 micron and adding

the 1<sup>st</sup> preparation with stirring to obtain a polymerizable ink composition curable by exposure to radiation. Thus the inventions of claims 1-30 are read in the reference. Regarding claim 26, it is deemed obvious in view of the reference since one of ordinary skill in that art would recognize this known polymerization technique is an obvious means of applying radiation to cure a photopolymerizable composition.

9. Claims 27-30 are rejected under 35 U.S.C. 102(3) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Johnson et al (6,593,390).

Johnson et al sets forth a photocurable ink composition. Per examples the inks have a viscosity between 15 and 20 cps at 30 °C. Said inks comprise a colorant having a particles size of not greater than 1 micron and having a narrow size range distribution and a reactive liquid material—see column 3. Said reactive liquid material comprises mono-, di-, and tri-functional acrylic compounds. Said mono-functional acrylic monomers include isobornyl acrylate and can be found in amounts from 20 to 60% by weight—see column 4 and column 6. The di-functional acrylic monomers include hexanediol diacrylate and tripropylene diacrylate and can be found in amounts from 10 to 35% by weight—see column 3 and column 6. Said tri-functional acrylic monomers include trimethylolpropane triacrylate and can be found in amounts from above 10 to 30% by weight—see column 4 and column 6. Johnson et al sets forth the bi- and tri-functional monomers are used to balance the properties of the ink and together read on the ratio as found in claim 27. Photoinitiators, photosensitizers and other additive can be added to the composition—see columns 7-8. Per example 1, Johnson et al teaches milling the pigment in an organic hyperdispersant, which reads on the organic medium of claim 27 as written, and filtering to a particle size of 1 micron and then forming a homogeneous mixture by blending with stirring the reactive liquid phase to produce an ink having a viscosity from 15 to 20 cps. Said inks are curable by exposure to radiation, such as ultraviolet light. Regarding claim 26, it is deemed obvious in view of the reference since one of ordinary skill in that art would recognize this known polymerization technique is an obvious means of applying radiation to cure a photopolymerizable composition. Therefore the inventions of claims 1-30 are read in the reference.

### *Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2001/0029867 to Hayashi et al sets forth a radiation curable ink composition comprising a colorant, acrylic oligomers and mono-, di-, and tri-functional acrylic monomers with a photoinitiator and other customary additive having a viscosity from 2 to 13.0 Pa\*s useful for stencil printing. Hayashi et al discloses using digital printers in the examples but while teaching dispersing the colorant in the reactive monomers and milling,

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kneading or compounding, fails to disclose the colorant particle sizes. US 7,015,257 (2004/0110862) to Hayashi et al sets forth a similar ink composition however teaches milling to a particles size of 500 nm.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

//Sanza L McClendon//

Acting Primary Examiner of Art Unit 1796